Index (CDAI), SF-36, and EQ-5D. "Best" health was identified by CDAI scores < median, SF-36 Physical and Mental Component Scores (PCS and MCS) ≥ median, and modality "1" responses to the EQ-5D dimensions. The non-parametric Wilcoxon test was used to compare the WPAI : CD scores between the subgroups. **RESULTS:** CD patients with the "worst" disease severity (CDAI > 288.1) showed higher impairment in work (+8.9%) and activities (+10.0%) vs. patients with "best" health. Similarly patients with "worst" HRQoL, as demonstrated by SF-36 PCS < 37.5 and MCS < 37.4, showed higher impairments in work (+20.0% by PCS, +18.5% by MCS) and activities (+22.2% by PCS, +15.5% by MCS) vs. "best" HRQoL. Patients with the "worst" EQ-5D states reported more impairment in work (+15.2% averaged over the 5 dimensions) and activities (+17.3%) vs. patients with the "best" states. All p-values were <0.001. **CONCLUSION:** The measurement of expected differences in work and activity impairment by disease severity and HRQoL levels supports the discriminant validity of the WPAI : CD.

PGI19

A COMMUNITY PERSPECTIVE ON THE EFFECT OF GASTROESOPHAGEAL REFLUX DISEASE ON PRODUCTIVITY WHILE AT WORK IN FRANCE

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OBJECTIVES: Gastroesophageal reflux disease (GERD) interferes with work productivity through two main mechanisms. Nighttime symptoms disturb sleep and cause daytime tiredness, while daytime symptoms affect work productivity by interrupting physical and social activities. A recent systematic review using data in general working populations from three separate studies indicated that GERD causes a reduction in productivity while at work of around 10%. The level of work productivity is strongly associated with symptom severity, symptom frequency, and the occurrence of nighttime symptoms. Hence, levels considerably higher than 10% have been observed in untreated patients with troublesome symptoms, e.g. up to 40% in patients with GERD-related sleep disturbances. The objective of this study was to estimate the effects of GERD on productivity while at work in France. **METHODS:** Work productivity data from two international studies in general working populations (n = 1111 and 1516, respectively) were used to compare results from the French sub-populations with overall results. Based on the results of these French sub-populations, estimation was made of the total work time lost because of GERD-related reduced work productivity. **RESULTS:** Findings from the French sub-populations were consistent with overall findings from the total samples, which indicated that GERD causes an average reduction in at-work productivity of around 10%. Assuming a French population of 36 million in working age, a prevalence of diagnosed GERD of approximately 10% and that 63% of GERD patients are employed and work around 36 hours per week, then it can be estimated that GERD causes an at-work productivity loss corresponding to around 380 million work hours per year in France. **CONCLUSIONS:** Intermediated through reduced productivity while at work, GERD symptoms have implications well beyond the individual patient perspective in terms of number of work hours lost for the French community.

PGI20

THE ASSOCIATION BETWEEN WORK PRODUCTIVITY AND RESPONSE TO PROTON PUMP INHIBITOR THERAPY IN PATIENTS WITH GASTROESOPHAGEAL REFLUX DISEASE

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OBJECTIVES: To explore the association between work productivity and response to treatment with proton pump inhibitors (PPIs) in patients with gastroesophageal reflux disease (GERD). **METHODS:** Interviews were conducted with 1908 patients with symptoms of GERD in the USA, UK, Germany and France. Patients diagnosed with GERD who were receiving PPIs were classified as complete responders (no symptoms), well-controlled (used a PPI compliantly, experienced an improvement in or decrease in frequency of symptoms, and suffered key GERD symptoms on ≤1 of the past seven days), incomplete responders (the same definition as well-controlled but with symptoms on ≥2 of the past seven days), or non-responders (no improvement or symptoms worsened). Information obtained included GERD-related absence from work and reduced productivity while at work because of GERD during the past seven days. **RESULTS:** The analysis included 237 employed patients on PPI treatment. The mean number of hours absent from work because of GERD was 0.1 for complete responders (n = 57), 0.1 for well-controlled (n = 32), 0.5 for incomplete responders (n = 128), and 1.3 for non-responders (n = 20). The mean percentage reduced productivity while at work was 4.3% for complete responders, 7.8% for well-controlled, 14.9% for incomplete responders, and 17.6% for non-responders. When pooling results for complete responders and well-controlled vs. incomplete responders and non-responders, mean differences between these two groups were 0.5 hours absence (0.1 vs. 0.6, $p < 0.05$) and a 9.7% reduction in work productivity (5.6% vs. 15.3%, $p < 0.0001$). The 9.7% difference in reduced productivity while at work corresponds to an equivalent of 3.9 work hours lost (% reduced productivity x hours worked) per patient, based on a 40-hour working week. **CONCLUSIONS:** There are significant differences in GERD-related work productivity depending on response to medical treatment, which suggests that strategies for improving management of GERD may be warranted.

HEMATOLOGICAL DISORDERS

PHM1

COST-EFFECTIVENESS OF REGULAR CONTINUOUS PROPHYLACTIC TREATMENT IN ADULT PATIENTS WITH SEVERE HEMOPHILIA A

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OBJECTIVES: To explore cost-effectiveness of prophylaxis with Refacto® (B-domain-deleted recombinant FVIII) in adults with hemophilia A. **METHODS:** A prospective, open, uncontrolled study was designed. Patients with hemophilia A aged 18 years or more, with frequent bleeding episodes, switching from on-demand treatment (ODT) to prophylaxis (PT), have been enrolled. All patients were treated with 25 IU/Kg of Refacto® 3 times-a-week for all the 6-month study period. Bleeding event rate and FVIII concentrate consumption have been evaluated over on-demand treatment time period (ODP), 6 months before enrolment, and the prophylaxis time period (PP), 6 months after enrolment. Medical costs (that represent 99% of total costs) have

been quantified adopting the perspective of the third party payer, i.e. the National Health Service. To determine cost-effectiveness, we calculated the incremental cost-effectiveness ratio (ICER) as the ratio of the difference in costs between ODP and PP to the difference in number-of-bleedings. The nonparametric bootstrap procedure was employed to generate Confidence Intervals (CIs). A cost-effectiveness plane and an acceptability curve were created. The cost-effectiveness acceptability curve represents the probability that Prophylactic treatment with Refacto® is cost-effective at all possible values of the maximum acceptable CER appropriate for decision-making. **RESULTS:** Nineteen patients, aged 23–58 years (mean = 33.2) with a mean of 2.97 events/patient/month (median = 1.67, range: 0.5–15) were enrolled. The incremental-costs of PT versus ODT was estimated to be €11,619/month (95%CI €7649–15,589) with an additional effect of 2.49 bleeding-avoided/month (1.06–3.93). The cost-effectiveness was estimated to be €5184 per bleeding avoided (€1071–9297). If the ceiling CER is €4500 per bleeding-avoided, there is a 50% chance that PT is cost-effective. The likelihood of PT being cost-effective increases to 95% with a ceiling ratio of €9000/bleeding-avoided. **CONCLUSIONS:** These findings showed prophylaxis with Refacto® in adults with haemophilia was effective. Our cost-effectiveness results can represent the point of reference for other similar evaluations.

PHM2

INPATIENT RESOURCE USE AND COSTS OF TRAUMA IN PATIENTS WITH VS WITHOUT BLOOD TRANSFUSION: EVIDENCE FROM THE HEALTH CARE COST AND UTILIZATION PROJECT DATABASE

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OBJECTIVE: To examine characteristics, length of stay (LOS), and costs associated with trauma-related hospital admissions with and without blood transfusions. **METHODS:** The 2003 Health care Cost and Utilization Project database was used to examine short-stay acute-care hospital discharges for trauma among adults with and without transfusions. This dataset includes all discharges from 995 hospitals in 35 states in the U.S. Trauma discharges were identified using ICD-9-CM diagnosis and E-codes; evidence of transfusion was inferred from procedure codes. Patient-level information included demographics, hospital characteristics, comorbidities, primary payer, admission source, discharge destination, estimated loss of function (ELOF), LOS, and hospital charges. Costs were estimated by applying hospital-specific cost-to-charge ratios to charges. Determinants of LOS and cost were assessed through multivariate least-squares regression. LOS and costs were log-transformed prior to the multivariate analyses and retransformation following estimation was undertaken employing the smearing method developed by Duan and colleagues. **RESULTS:** Of the 263,816 trauma-related discharges in 2003, 28,859 (11%) had evidence of blood transfusion. Patients with transfusion were more likely than those without transfusion to be female (68% vs. 52% without hemorrhage), aged 65+ years (78% vs. 47%), major or extreme ELOF (46% vs. 19%), and to die in hospital (6% vs. 2%). After adjusting for covariates and retransformation, patients with transfusion, on average, stayed 1.8 more days and cost an additional $5400 (both $p < 0.01$). Significant predictors (all $p < 0.01$) of increased cost included male gender; Hispanic and Asian (vs. white) race; care at large, urban, and teaching hospitals; coverage by private (vs. public) payer, admission through the emergency room, increased ELOF, and in-hospital mortality. Predictors of decreased cost included older age, black (vs. white) race, and Midwest region (vs. Northeast). **CONCLUSION:** Trauma patients with transfusion account for a disproportionate share of inpatient trauma-related resource use and cost.

PHM3

HEPARIN-RELATED THROMBOCYTOPENIA ASSOCIATED WITH MAJOR INCREASE IN HOSPITAL COSTS

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OBJECTIVES: To estimate the incremental hospital costs and related length of stay associated with the development of thrombocytopenia in a general medical/surgical population. **METHODS:** We included patients from the Complications After Thrombocytopenia Caused by Heparin (CATCH) Registry treated with heparin for ≥96 hours (n = 1997). Hospital costs for all CATCH patients were estimated using hospital cost accounting system results for CATCH Registry patients enrolled at Duke University Medical Center (n = 336). After adjusting for baseline characteristics, and procedures and complications occurring before 96 hours, we estimated incremental hospital costs associated with thrombocytopenia defined prospectively by a platelet count drop to $<150 \times 10^3/mm^3$, a platelet count reduction >50% from admission level, or both. **RESULTS:** Overall, 28% of CATCH patients receiving heparin for ≥96 hours developed thrombocytopenia. These patients more commonly had a history of MI (23% vs. 15%), heart failure (29% vs. 24%), and experienced more in-hospital death (5.1% vs. 1.1%) than patients who did not develop thrombocytopenia. The total population's average length of stay was 14.5 days with mean hospital costs of $29,523, but both values were significantly greater among patients developing thrombocytopenia (18.0 vs. 13.2 days, and $45,192 vs. $23,527). After adjustment, the development of thrombocytopenia in all groups remained a significant marker for increased hospital costs over patients without thrombocytopenia (incremental costs = $5262 in patients with a platelet count drop to $<150 \times 10^3/mm^3$, $9340 in patients with a platelet count reduction >50% from admission level, and $18,488 in patients meeting both criteria). **CONCLUSIONS:** The incremental economic impact of thrombocytopenia, experienced commonly among hospitalized patients, is substantial. Strategies that minimize or effectively prevent the development of thrombocytopenia may therefore be economically attractive.

PHM4

SYSTEMATIC REVIEW OF THE COSTS OF HEMATOLOGIC ADVERSE EVENTS IN ADULT CANCER PATIENTS TREATED WITH CHEMOTHERAPY

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OBJECTIVES: Cancer patients receiving chemotherapy commonly experience hematologic adverse events (AEs) which increase the costs of care. This study examined the economic outcomes of neutropenia, thrombocytopenia, and anemia as AEs of chemotherapy treatment. **METHODS:** A systematic search of the medical literature (1990–2006) was conducted for each AE using costs/economics as search terms. Additional searches were conducted from article bibliographies and conference proceedings (2000–2006). Articles selected were prospective or retrospective studies specifically designed to examine burden of illness, direct medical costs, or cost drivers associated with hematologic AEs in adult cancer patients undergoing chemotherapy.